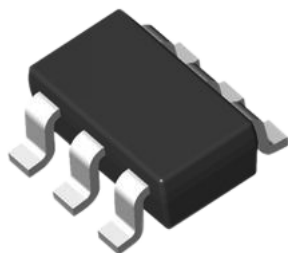
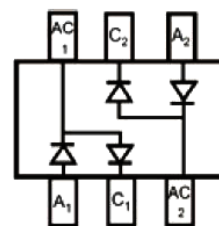


# Surface Mount Fast Switching Diode



## Features:

- High Conductance
- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Application



**SOT-363**

## Applications:

High speed switching application

## Max. Rating @ T<sub>A</sub> = 25°C unless otherwise specified

| Parameter  | Symbol   | Limits      | Unit |
|--|--|-------------|------|
| Non-Repetitive peak reverse voltage  | V <sub>RM</sub>  | 100         | V    |
| Peak repetitive peak reverse voltage<br>Working peak reverse voltage<br>DC reverse voltage | V <sub>RRM</sub><br>V <sub>RMS</sub><br>V <sub>R</sub> | 80          | V    |
| RMS reverse voltage  | V <sub>R(RMS)</sub>                                    | 57          | V    |
| Forward continuous current   | I <sub>FM</sub>  | 500         | mA   |
| Average rectified output current   | I <sub>O</sub>   | 250         | mA   |
| Forward surge current<br>@t = 1μs<br>@t = 1s   | I <sub>FSM</sub>                                       | 4<br>2      | A    |
| Power dissipation  | P <sub>D</sub>   | 200         | mW   |
| Thermal resistance junction to ambient air   | R <sub>θJA</sub>                                       | 625         | °C/W |
| Operating and storage temperature range  | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +150 | °C   |

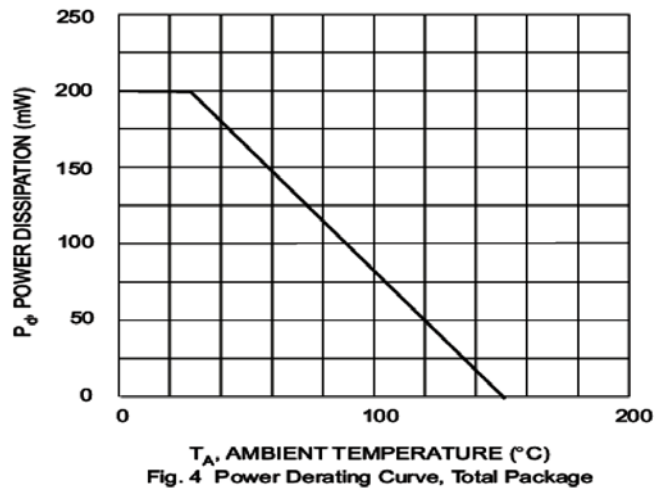
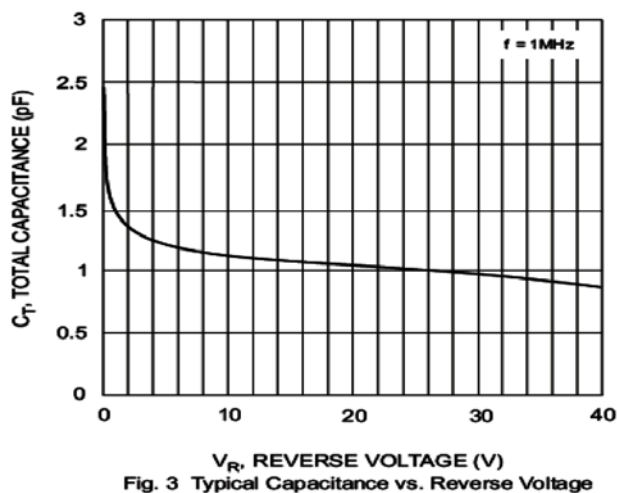
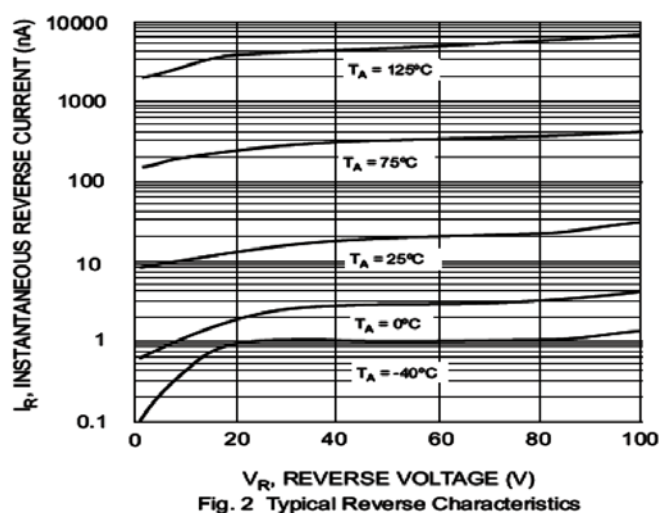
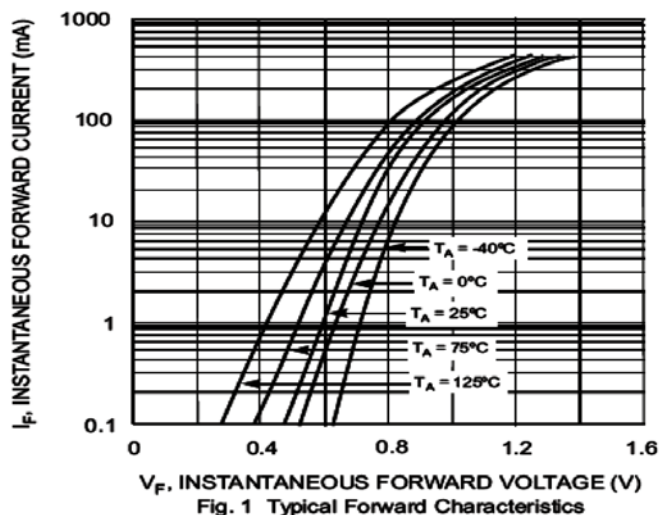
## Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

| Parameter                 | Symbol             | Conditions   | Min.                | Max.                       | Unit                 |
|---------------------------|--------------------|--|---------------------|----------------------------|----------------------|
| Reverse breakdown voltage | V <sub>R(BR)</sub> | I <sub>R</sub> = 100μA   | 80                  | -                          | V                    |
| Average reverse current   | I <sub>R</sub>     | V <sub>R</sub> = 70V<br>V <sub>R</sub> = 75V, T <sub>j</sub> = 150°C<br>V <sub>R</sub> = 25V, T <sub>j</sub> = 150°C<br>V <sub>R</sub> = 20V | -                   | 100<br>50<br>30<br>25      | nA<br>uA<br>uA<br>nA |
| Forward voltage           | V <sub>F</sub>     | I <sub>F</sub> = 5mA<br>I <sub>F</sub> = 10mA<br>I <sub>F</sub> = 100mA<br>I <sub>F</sub> = 150mA  | 0.62<br>-<br>-<br>- | 0.72<br>0.855<br>1<br>1.25 | V                    |
| Total Capacitance         | C <sub>T</sub>     | V <sub>R</sub> = 6V, f = 1MHz  | -                   | 2                          | pF                   |
| Reverse recovery time     | t <sub>rr</sub>    | I <sub>F</sub> = 5mA, V <sub>R</sub> = 6V  | -                   | 4                          | ns                   |

# Surface Mount Fast Switching Diode



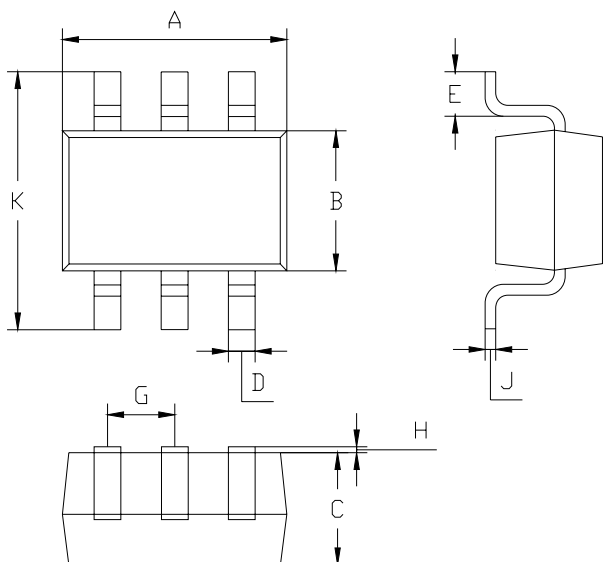
Typical Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified



# Surface Mount Fast Switching Diode

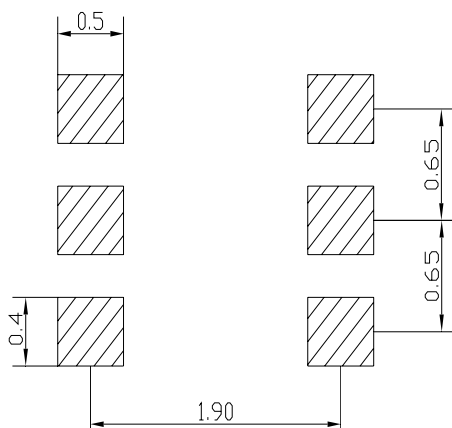


## Plastic surface mounted package



| SOT-363              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 1.8          | 2.2  |
| B                    | 1.15         | 1.35 |
| C                    | 1 Typical    |      |
| D                    | 0.10         | 0.30 |
| E                    | 0.25         | 0.40 |
| G                    | 0.65 Typical |      |
| H                    | 0.02         | 0.10 |
| J                    | 0.1 Typical  |      |
| K                    | 2.1          | 2.3  |
| All Dimensions in mm |              |      |

## Soldering Footprint



Unit : mm

## Package Information

| Device           | Package | Shipping            |
|------------------|---------|---------------------|
| MMBD4448HSDW-7-F | SOT-363 | 3,000 / Tape & Reel |

## Part Number Table

| Description                        | Part Number      |
|------------------------------------|------------------|
| Surface Mount Fast Switching Diode | MMBD4448HSDW-7-F |

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